

REMARKS

Claims 1-20 are cancelled and Claims 21-40 are added. Claims 21-40 remain in the application.

Attached is a marked-up copy of Fig. 3 showing a proposed amendment changing reference numerals "14" to "15". Support for this amendment is found on Page 3, Lines 24-26, and in Figs. 1, 2, 4 and 6 of the drawings as originally filed.

No new matter is added by the amendments to the drawings and the claims.

The Rejections:

In the Office Action dated August 9, 2005, the Examiner rejected Claim 19 under 35 U.S.C. 112, second paragraph, as being indefinite for reciting the limitation said "fastener means" in line 11 because here is insufficient antecedent basis for this limitation in the claim.

The Examiner rejected Claims 1, 2, 5-9, 11, 12, 16-18, and 20 under 35 U.S.C. 103(a) as being unpatentable over Felber (CH 346442) in view of Plamper (US 4,229,994). The Examiner stated that Felber discloses a mounting hub comprising a frustum-shaped body (5) having an upper surface with a first diameter and an opposed lower surface having a second diameter larger than the first diameter (see Fig 2), the upper surface having fastening means (see Fig 2), and a mounting bore (see Fig 2) extending through the body between the upper surface and the lower surface, and the bore having an inner surface (see Fig 2); but Felber does not disclose the hub being made of plastic. The Examiner stated that Plamper discloses a hub made from plastic (col. 1 lines 49-56) and it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hub of Felber to be made from plastic as taught by Plamper in order to improve the strength of the hub.

Regarding Claims 2 and 12, the Examiner stated that the fastening means is a plurality of apertures formed in the body at the upper surface (see Fig 2).

Regarding Claims 5 and 15, the Examiner stated that the inner surface (11) has a cylindrical profile with a plurality of radially outwardly extending grooves (see Fig 2).

Regarding Claim 6, the Examiner stated that including a recess (6) formed in the upper surface (see Fig 2).

Regarding Claims 7 and 16, the Examiner stated that including an annular recess (10) formed in the lower surface between a central boss and an outer wall of the body (see Fig 2).

Regarding Claims 8 and 17, the Examiner stated that a plurality of ribs dividing the recess into a plurality of segments (col. 1 lines 20-21).

Regarding Claims 9 and 18, the Examiner stated that each segment has an associated slot formed in a bottom wall of the recess (see Fig 2).

Regarding Claim 20, the Examiner stated that the splines are rectangular (well known).

The Examiner rejected Claim 10 under 35 U.S.C. 103(a) as being unpatentable over Felber (CH 346442) in view of Leston (GB 1236264) and Plamper (US 4,229,994). The Examiner stated that Felber discloses a steering wheel (1) having a center disk, a fastener means, and a mounting hub connected to the center disk (3) by said fastener means (8), a frustum-shaped body (5) having an upper surface with a first diameter and an opposed lower surface having a second diameter larger than the first diameter (see Fig 2), a plurality of apertures formed in the body at the upper surface (see Fig 2), a central recess (6) open to the upper surface, and a mounting bore (see Fig 2) extending through the body between the upper surface and the lower surface, and the bore having an inner surface (see Fig 2); but that Felber does not disclose the mounting bore being tapered. According to the Examiner, Leston discloses the mounting bore being tapered (see Fig 2) and it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hub of Felber to include a taper as taught by Leston in order to prevent the hub moving downward on the shaft.

The Examiner further stated that Felber discloses a hub as described above, but Felber does not disclose the hub being made of plastic. According to the Examiner, Plamper discloses a hub made from plastic (col. 1 lines 49-56) and it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hub of Felber to be made from plastic as taught by Plamper in order to improve the strength of the hub.

The Examiner rejected Claims 3, 4, 13, and 14 under 35 U.S.C. 103(a) as being unpatentable over Felber (CH 346442) in view of Steffens, Jr. (US 6,457,743). The Examiner stated that Felber discloses a hub as described above, but Felber does not disclose the inner surface having a star shaped profile formed by a plurality of v-shaped grooves. According to the

Examiner, Steffens, Jr. discloses a hub having an inner surface having a star shaped profile formed by a plurality of v-shaped grooves and it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hub of Felber in view of the teachings of Steffens, Jr., to include the star shaped profile in order to prevent relative rotation between the hub and the shaft.

Applicants' Response:

Cancelled Claims 1-20 are written as new Claims 21-25, 27-40 and 26 respectively.

Felber shows a two part hub 6 having a lower part 5 and an upper part 7 with a steering wheel 1, 2, 3 trapped therebetween. The lower part 5 tapers upwardly from a larger diameter to a smaller diameter. At least two apertures 10 extend from the lower surface to the upper surface of the lower part 5. The upper surface of the lower part 5 is stepped at 4 such that the apertures 10 open in a different plane than a central recess of the lower part. Applicants note that Felber does not show the following features recited in independent Claims 21, 32 and 40:

- a. A plastic body.
- b. An upper surface wherein the fastener apertures and the steering shaft nut recess open in a common plane (The upper surface of Felber's lower part 5 is stepped at 4 and the apertures 10 do not extend to the upper surface of the upper part 7).
- c. Fastening apertures that do not extend to the lower surface (Felber's apertures 10 open to the lower surface of the lower part 5).

Applicants note that Felber does not show the tapered mounting bore defined by independent Claims 42 and 40 (Felber's bore is straight from the lower surface to the tapered recess).

Felber also does not show a mounting bore that prevents the end of the steering shaft from extending above the common plane (Claims 21 and 32) or a steering wheel central disk that covers the retaining nut (Claim 40).

The Plamper reference shows the use of plastic to make a steering wheel 11 having a rim 13 carried at the outer ends of spokes 14 radiating from a hub 15. A central opening in the hub has two opposed tapered flat walls and two opposed round walls to match the profile of a

steering shaft 12. However, Plamper fails to provide the missing "upper surface wherein the fastener apertures and the steering shaft nut recess open in a common plane", the missing "fastening apertures that do not extend to the lower surface", the missing "mounting bore that prevents the end of the steering shaft from extending above the common plane" and the missing "steering wheel central disk that covers the retaining nut" defined by Applicants' claims.

Leston shows a mounting bore that is partially tapered and threaded bores 18 in the upper surface for screw bolts 9. However, there is no recess for the nut 11. Therefore, Leston fails to provide the missing "upper surface wherein the fastener apertures and the steering shaft nut recess open in a common plane", the missing "mounting bore that prevents the end of the steering shaft from extending above the common plane" and the missing "steering wheel central disk that covers the retaining nut" defined by Applicants' claims.

Steffens, Jr. states that the hub 130 has a splined first section 142 which appears to be similar to the configuration shown at 11 in Felber. Thus, Steffens, Jr. adds nothing to the hub shown in Felber. In contrast to the splined mounting bore shown in Felber and Steffens, Jr., Applicants' star-shaped profile is shown in Fig. 6 as having six V-shaped grooves 19a spaced apart around the mounting bore 18a. See new Claims 23, 24, 34 and 35.

Thus, no combination of Felber, Plamper, Leston and Steffens, Jr. shows or suggests the steering wheel mounting hub or the steering wheel assembly defined by Applicants' Claims 21-40.

In view of the amendments to the claims and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.